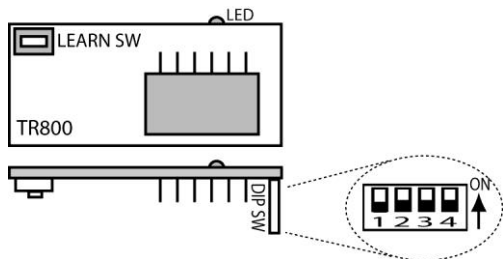# DICKER DATA | CONNECT

SURVEILLANCE AND SECURITY

Radio Receiver Module, 433MHz BOSCH™ Compatible Fits to Livewire Relay Boards (RLDP-V, RLSPHC-V)

2.0 Overview

- ✓ 433MHz radio receiver.
- ✓ Compatible with Bosch™ series keyfob alarm transmitters.
- ✓ Plugs on to Livewire RLDP-V or RLSPHC-V relay boards.
- ✓ Two outputs: (1) relay on relay board and (2) logic level output.
- ✓ Remote trigger input for wired pushbutton control.

3.0 Specifications

Parameter	Description
Dimensions (mm)	36w x 9d x 18h
Frequency	433.42MHz
Modulation	ASK
Compatible keyfob transmitters	(a) Bosch™ RF3332E,RF3334E,RFKF-FB, RFPB-SB, RFPB-TB, HCT-4UL (B3/B4 only), RF3401E, RFUN (b) Connect T433B, T433BU.
Compatible relay boards	(a) Livewire RLDP-V (b) Livewire RLSPHC-V
Outputs	(a) 2 (one relay, one logic level)
Output timers	(a) Seconds: 1-255 (b) Minutes: 1-100
Max number learned transmitters	16
Operating temp	0 deg C – 55 deg C
Operating voltage	12VDC (11.5V min, 13.8V max)
Operating current	(a) Relay off: 24mA (b) Relay on: 35mA

Programmed keyfobs and timer values retained during power down.

6.0 Switch Settings, Receiver Mode and Outputs

Sw	Function	Off (0)	On (1)	Default	Note
S1	TP Function	TP=OUT4	TP=Remote Trigger	Off	1,2
S2	Unused			Off	5
S3	OUT1	Pulse Tmo	Toggle	Off	3,5
S4	OUT4	1s Pulse	S1 on: Toggle S1 off: 1s pulse	Off	

Note 1: When used as Remote Trigger Input, triggered on negative edge. Pulled high via 10k to 3.3V.
Note 2: When used as second output (OUT4), TP is connected to Microcontroller (3.3V), positive logic via 470R (max 7mA).
Note 3: Pulse Tmo set as shown in Section 4
Note 4: Buttons B1-B4 refer to Keyfob buttons as shown.

7.0 Setting Pulse Output Time (Default: 2 Secs)

To set the pulse output time:
b) Remove power.
c) Press **LEARN** button.
d) Apply power, still holding **LEARN**. LED will light then turn off when ready to count pulses.
e) Press **LEARN** 'x' times to set the pulse output time to 'x'. LED flashes once per push.

a) After entering the desired pulse output time, set the units:
  (i) **Seconds:** Do nothing, the heartbeat will restart and the timer will be set in units of seconds. Range 1-255s.
  (ii) **Minutes:** Press and hold **LEARN.** When LED lights solid, release. Units will be set to minutes. Range 1-100m.

If no button press is detected within 5 secs, pulse count mode is aborted and TR800-433B returns to normal receive mode.

3.0 Remote Trigger Input (TP)

For wired pushbutton control. When enabled, the Remote Trigger Input is active on TP. Shorting TP to ground causes the relay to operate as if the appropriate keyfob transmitter button was pressed.

Output behaves as defined by S3. **To enable, set DIPSW S1 ON (See also Section 14.0).**

4.0 Second Output (OUT4 on TP)

When enabled, TP is a second output. Off=0V, On=3.3V.
To enable, set DIPSW S1 OFF (See also Section 14.0).

5.0 Compatible Transmitters

The following keyfobs are compatible with the TR800-433BM. Also operates with external input on point transmitter RFUN, T433BU and RF3401E.

T433B   RF3334E   HCT-4UL (B3/B4)   RFPB-SB   RFPB-TB   RFKF-FB

1.0 Learning and Deleting Keyfobs, Assigning to Outputs

To learn a transmitter (i.e., assign one or more buttons to outputs):

1. Press **LEARN** until LED goes off (approx 1 sec). Release. LED should be OFF.
2. Select output to be programmed by pressing **LEARN** once for each output (1=OUT1, 4=OUT4. LED flashes each time button pushed and released.
3. Then either:

A	**LEARN** Keyfob button to output.	Press desired keyfob button.
B	**LEARN** Keyfob PANIC to output.	Press PANIC (B1+B2).
C	**DELETE** transmitter(s) learned to output. Use to delete transmitters which are lost, otherwise see Section 10.0.	Press LEARN and hold 2s (until LED does single long flash) to delete all transmitters which control the output. **IMPORTANT: if the same transmitter controls another output, it will be deleted from there also.**

4. LED flashes once when device learned.
5. Repeat above for all keyfobs to be programmed.

Note that:
1. When learned, the output assigned to the transmitter will operate according to the DIP switch settings for that output.
2. The TR800-433BM will exit learn mode after either 25 secs or when a transmitter has been successfully learned.
3. If learning previously learned transmitter, there is no response.
4. When receiver is full, any new transmitters overwrite the last.
5. **Important: If a button of a keyfob is learned to an output, you cannot learn a second button on the same keyfob to the same output. The keyfob must be deleted then relearned.**

8.0   Install Mode

To enter Install Mode, press **LEARN** button and hold for 5 secs until LED does double flash.

If required, install mode can be used when installing wireless devices. It reduces the sensitivity of the TR800 so that devices which work in install mode will work even better in normal mode (i.e., it provides a margin of safety).

To exit Install Mode, press the **LEARN** button.

9.0   Deleting a Single Transmitter

1.   Press **LEARN** until LED turns off (1s) then release.
2.   Press PANIC buttons of keyfob to delete (B1+B2).
3.   LED will do a **long flash**.

10.0 Deleting All Transmitters (Reset)

To delete all transmitters push **LEARN** and hold for 20 secs:

(a)   After 5 secs, LED does double flash (install mode).
(b)   After 15 secs, LED does quick angry flash to warn that deleting data is imminent.
(c)   After 20 secs, LED is on solid and all transmitters have been deleted.
(d)   Release **LEARN.**

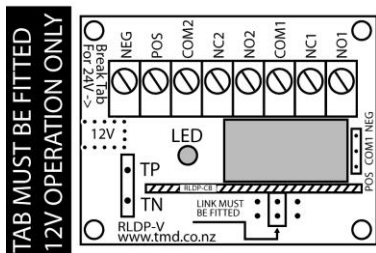## 11.0 Installation Tips

IMPORTANT. To achieve good performance from TR800-433BM:

1.   Connect antenna (18cm length) into TN
2.   Antenna should be in horizontal plane. Don't curl up!
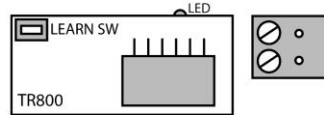3.   Install away from wires and metal objects.

12.0 LED Operation

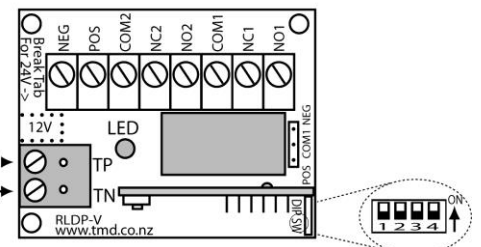|	State	LED	Comments
1	Idle.	Double short flash every 2 secs.	Normal state when not receiving data.
2	Receiving data from learned transmitter.	Single long flash.	
3	Receiving data from unlearned transmitter.	Double flash.	
4	Install mode.	Double short flash every sec.	Reduced sensitivity
5	Delete warning	Fast flash.	About to delete all transmitters.
5	Error.	On with short double blink off; or Double.	Data in system area (transceiver config) corrupted.
6	EE Corrupt (transmitter).	Double long flash every 2 secs.	One or more transmitter record corrupted.

13.0 Installing the TR800-433BM on RLDP-V and RLSPHC-V Relay Boards

Remove Link from RLDP-V

TR800 with 2-Pin Screw Connector for TP/TN

TR800 and Connector Installed on RLDP-V

14.0 Force On/Off Outputs

To assign a keyfob button to turn an output on **and a different** button on the same keyfob to turn the same output off:

1.   Learn the button (B1-B4) required to turn output ON.
2.   Learn the button (B1-B4) required to turn output OFF.

The first learned button turns output ON, the second turns it OFF.

IMPORTANT:
1.   Force On/Off overrides DIP switch settings.
2.   **DO NOT** use a button for Force On/Off control which is already assigned to another output.
3.   If in doubt, reset the device (Section 3) before programming.

15.0 Using TP as Trigger Input or Second Output

TR800/RLDP-V with Remote Trigger Input

Antenna 18cm

TR800/RLDP-V with Second Output

OUT4 Off=0V, On=3.3V

Antenna 18cm